REMARKS

The Office Action dated June 2, 2006, has been received and carefully noted. The above claim amendments and the following remarks are submitted as a full and complete response thereto.

Claims 1-11 and 13-21 have been amended to more particularly point out and distinctly claim the subject matter of the invention. Claims 22 and 23 have been added. No new matter has been added, and no new issues are raised which require further consideration and/or search. Claims 1-11 and 13-23 are submitted for consideration.

Claim 21 was rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 21 has been amended to overcome this rejection. Therefore, Applicant requests that this rejection be withdrawn.

Claim 14 was rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. Specifically, the Office Action indicated that "the inputs" of claim 14 lack clear antecedent basis. Claim 14 has been amended to overcome this rejection. Therefore, Applicant requests that this rejection be withdrawn.

Claims 1-11 and 13-21 were rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,714,551 to Le-Ngoc. The rejection is traversed as being based on a reference that neither teaches nor suggests the novel combination of features clearly recited in independent claims 1, 16 and 21.

Claim 1, upon which claims 2-11 and 13-15 depend, recites an apparatus including a calculator adapted to receive indications of a selected communication indicia associated with communication characteristics of a communication channel during a selected interval. The apparatus is configured to transmit data upon the communication channel and to dynamically select at least a first switching threshold used in selection of a modulation parameter. The calculator is configured to select the at least first switching threshold. The first switching threshold is changeable responsive to changes in the selected communication indicia and the first switching threshold is selected by the calculator to at least satisfy a first performance criteria and to satisfy at least a second performance criteria.

Claim 16, upon which claims 17-20 depend, recites a method including selecting at least first switching threshold responsive to indications of a selected communication indicia associated with communication characteristics of a communication channel during a selected interval. The first switching threshold is selected to at least satisfy a first performance criteria and to satisfy at least a second performance criteria. The method also includes selecting the modulation parameter by which the data is operated upon by the first communication station prior to transmission upon the communication channel. The method further includes changing the at least first switching threshold responsive to changes in the indication s of the selected communication indicia and selectably changing the modulation parameter responsive to changes in the at least first switching threshold.

Claim 21 recites an apparatus comprising a processor embodied on a computer readable medium, the processor having a linear-reward-inaction learning algorithm executable thereat for receiving indications of a selected communication indicia associated with communication characteristics of a communication channel during a selected interval. The apparatus for a first communication station being operable to transmit data upon a communication channel and to dynamically select at least a first switching threshold used in selection of a modulation parameter, selecting the at least first switching threshold. The first switching threshold is selected by the linear-reward-inaction learning algorithm to at least satisfy a first performance criteria and to satisfy at least a second performance criteria.

As outlined below, Applicant submits that the cited reference Le-Ngoc does not teach or suggest the elements of claims 1-11 and 13-21.

Le-Ngoc discloses LANs within a metropolitan area. The LANs include inner routers 300 and outer routers 400. Data packets are received, by the outer routers, from the inner routers and passed to a baseband processor which selectively alters the bit rate of the data packets, performs error correction encoding on the data packets and spectrum spreading, as necessary. The data packets are then passed to a modulator section for modulation of the data onto a radio frequency carrier signal. The modulated signal is then up-converted, amplified and transmitted over a wireless communication link by a transceiver. The data packets are received from the wireless link by a receiver, passed to a demodulator and the demodulated data is passed to the baseband processor.

According to Le-Ngoc, a transmission quality monitor monitors the quality of the wireless transmission link from which the data is received. For example, the transmission quality monitor calculates the bit error rate based upon data errors reported to the monitor by the baseband processor. In addition, the transmission quality monitor can monitor the received signal strength, the signal-to-noise ratio, and other performance parameters, such as cluster variance, eye opening, and un-corrected error count. The performance parameters form a performance indicator in the wireless link in the receiving direction. The transmission quality monitor periodically reports the monitored performance indicator to the inner router and also sends the performance indicator to its counterpart in the other node of the link. The transmission quality monitor then performs an appropriate control procedure to maintain the require transmission performance. The transmission quality monitor keeps a history of the performance indicators for further performance and fault analysis by itself of by a transmission quality processor. Col. 6. line 61-Col. 8, line 16.

Figures 5 and 6 of Le-Ngoc illustrate an example of the implementation of a monitoring and control procedure. Nodes B and C periodically exchange their monitored performance indicators. In block 501, Node B keeps track of its own transmitted power and the monitored signal-to-noise ratio and bit error rate of Node C. In a normal condition, Node B sets its transmitted power to a nominal level. When rain fade occurs over the link between Nodes B and C, the signal-to-noise ratio of both nodes tends to be reduced. As the signal-to-noise ratio approaches a threshold value, the monitored bit

error rate tends to increase. Node B continuously compares the monitored signal-to-noise ratio of Node C to a preset warning level, where the warning level is higher than the threshold value. When the monitored signal-to-noise ratio is below the preset warning level, Node B sends a control message to Node C, instructing Node C to prepare to switch to a lower data rate and modulation level. Then Node B applies the reduced data rate and lower modulation level to its transmitted signal in a manner that is coordinated with Node C. Node B also increases its transmitted power to its maximum level. Assuming that the rain fade is transitory, switching from low data rate to high data rate occurs. The above procedure is executed by the transmission quality processor. Col. 11, line 36- Col. 12, line 53.

Applicant submits that Le-Ngoc simply does not teach or suggest the combination of elements clearly recited in claims 1-11 and 13-21. Each of claims 1 and 21, in part, recites that the calculator is configured to select at least the first switching threshold, the first switching threshold being selected by the calculator to at least satisfy a first and second performance criteria. Claim 16 recites, in part, that the linear-reward-inaction learning algorithm is configured to select at least the first switching threshold, the first switching threshold being selected by the calculator to at least satisfy a first and second performance criteria. The Office Action indicated that 406, 402 and 440 of Le-Ngoc are the same as the calculator of the present invention. According to Figure 4 of Le-Ngoc, 402 is a router interface and 406 is the transmission quality monitor. There is no illustration in figure 4 of Le-Ngoc of 440. Nevertheless, there is no teaching in Le-Ngoc

that either the router interface or the transmission quality monitor is configured to select at least the first switching threshold, the first switching threshold being selected by the calculator to at least satisfy first and second performance criteria, as recited in the presently pending claims. As noted above, the transmission quality monitor of Le-Ngoc periodically reports the monitored performance indicator to the inner router which includes the transmission quality processor. Figures 5 and 6 and the associated disclosure of Le-Ngoc state that Node B sets its transmitted power to a nominal level, and continuously compares the monitored signal-to-noise ratio of Node C to a preset warning level. There is no teaching or suggestion in Le-Ngoc that the either transmission quality monitor or the router interface is configured to select at least the first switching threshold, the first switching threshold being selected by the calculator to at least satisfy first and second performance criteria, as recited in the presently pending claims. Therefore, Applicant respectfully asserts that the rejection under 35 U.S.C. §102(e) should be withdrawn because Le-Ngoc does not teach or suggest each feature of claims 1, 16, and 21 and hence, dependent claims 2-11, 13-15, and 17-20 thereon.

Claims 1-11 and 13-21 were rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,498,510 to Warner. The rejection is traversed as being based on a reference that neither teaches nor suggests the novel combination of features clearly recited in independent claims 1, 16 and 21.

Warner discloses that an adaptive threshold logic circuit is provided in which the switching threshold levels of the logic circuit are automatically changed to accommodate

variations in the level of applied data signals to the switching circuit. A detector stage detects the voltage level of the incoming data signals and selectively adjusts the threshold level of the incoming data signals and selectively adjusts the threshold level of a threshold adaptor stage in accordance with the output of the detector stage. See at least the Abstract.

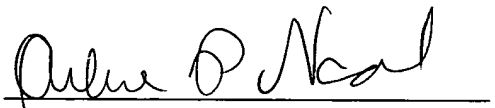
Applicant submits that Warner simply does not teach or suggest the combination of elements clearly recited in claims 1-11 and 13-21. The Office Action indicated that the Abstract, figure 4 and claim 1 of Warner teaches an adaptive threshold logic circuit adapted to receive indications of selected communication indicia associated with communication characteristics of the communication channel for dynamically selected a first switching threshold. Each of the presently independent claims recites that first switching threshold is selected by the calculator to satisfy at least first and second performance criteria. There is not teaching or suggestion in Warner of selecting the first switching threshold by the calculator to satisfy at least first and second performance criteria. Therefore, Applicant respectfully asserts that the rejection under 35 U.S.C. §102(e) should be withdrawn because Warner does not teach or suggest each feature of claims 1, 16, and 21 and hence, dependent claims 2-11, 13-15, and 17-20 thereon.

As noted previously, claims 1-11 and 13-23 recite subject matter which is neither disclosed nor suggested in the prior art references cited in the Office Action. It is therefore respectfully requested that all of claims 1-11 and 13-23 be allowed and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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Enclosures: Additional Claim Fee Transmittal
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